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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

S-E-C-R-E-T

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

a report describing the Norma uranium ore filtration press used at the IXth Inspectorate of the Jachymov Mines at Nejdek (N 50-20, E 12-45).

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STATE	ARMY	NAVY	AIR	FBI	AEC				
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(Note: Washington distribution indicated by "X"; Field distribution by "#".)

at NEJDEK

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1. Particular features and use of the press

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a) The NORMA press is of Czechoslovak make, and is substantially the same type as the PIONYR. It has however more frames and plates, 36 of the former and 35 of the latter.

b) The press is used for the second process, extraction of radioactive material, which goes through the PIONYR press and back to the soda chamber, and after preparation and mixing with heavy water, about 40 % radioactive material having been extracted from it, it passes through the NORMA press which extracts the remainder of radioactivity from it. It is also subjected to greater pressure. The waste material is not put through further processing, but is mixed with water in the bunker and goes through a pipeline under pressure to the slagheap. Only the radioactive water goes on for further processing.

c) The press is opened after about 20 minutes. The amount of waste is 1,800 - 2,300 kg and 600 - 800 litres of radioactive water are drawn off.

d) Pressure is 7.5 atu and about 5 kg to a square cm.

e) Operation is the same as for the PIONYR, the press being operated by two men. Its operation is uninterrupted.

2. Key to plan B (sketch of press)

1) Pressure pipeline, metal, diameter 3 - 4 cm.

2) Air pipeline

3) Pressure gauge, divided into 200 degrees, to which both pipes lead.

4) Contracting headpiece for exerting pressure either by hand or by means of a lever on the frames.

5) Sliding handle on the cast metal end plate which turns over sideways to allow the press to be opened or expanded.

6) Cast metal end plate, sliding, about 30 cm thick and 1.35 x 1.30 m, for closing the press.

7) Wooden frames, 36, each acting as a filter, at the same time retaining the material.

8) Suction pipe for drawing off heat, since this is considerable when the press is opened. It is also used for drawing off the radioactive water, and this process is known as drying off the material.

9) Suction pressure gauge, divided into 150 degrees. The press is opened at 60° Celsius.

10) Release regulator for regulating the flow of material in the pipe bringing it to the press, which is metal, 25 cm in diameter.

11) Pipe from the regulator to drive the material on to the frames

12) Rear buffer plate, cast metal, immovable, 40 cm wide, and 135 x 130 cm.

13) Handles for the frames to allow them to be drawn out when the press is opened for the material to be removed.

14) Steel strut running along the length of the press to prevent it from shifting

15) Broad rubber belt running the whole length of the press and preventing liquid material from splashing out of the frames and falling below the press.

16) Handle on roller for rubber belt, turned by hand, which can be withdrawn.

17) Metal roller, diameter 50 cm, for rubber belt

18) Head of press, cast metal, solid, on a steel base.

19) Metal bunker below the press, for catching solid material which falls below the press.

20) Conveyor belt below the trough, steel, 60 m wide, and edges 20 cm high for catching the material as it falls through and transporting it to the main bunker.

21) Trough for carrying away the radioactive water, running along the lower edge of the plates, carrying the water to a special bunker, whence it goes to the NORMAL press.

3. Key to detail of frame

The frames are larger than those on the PIONYR press, 1.40 cm by 1.40 cm and made of wood, the sides 6 cm thick, 10 cm wide at the sides and 15 cm wide at the top and bottom. The protrusions are 15 x 15 cm.

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1) Depressionising chamber, 1 only for the NORMA frames, about 8 cm ⌀, for 25X1 driving air to the plates, to press out the last of the water by means of the silon filters, pressure 3.5 - 3.8 units.

2) Chamber through which the material is driven, under pressure of 7.5 units, 8 cm in diameter, from which an oval opening carries material through the side into the frame, which takes about 70 - 90 kg of material. 25X1

4. Key to sketch of NORMA plate

1) Depressionising chamber, the same size as that in the frame, with an oval hole in the wall through which air is driven into the silon filter.

2) Handle for drawing out the plate

3) Outflow opening for material, oval, opposite the inflow, through the side wall.

4) Protrusions on the frame and plate where are located the material and depressionising openings, wrapped with silon wrappings, which prevents possible leakage of material between the protrusions.

5) Section of silon packing

6) Silon packing in position

7) Ribbing on plate, the same type as on the PIONYR press, except that the ribs are more widely separated, so that there are only $10\frac{1}{2}$, the half being on the side where is the outflow opening. The ribbing on the PIONYR press has grooves about 4 cm long and or irregular width, about 5 cm. No dimensions are quoted for the NORMA press.

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